

IN THE CLAIMS

5 Please cancel Claims 1-28, 43, and 45 without prejudice, and add new Claims 47-62 as follows:

10 1.- 46. (Cancelled)

47. A connector assembly comprising:

a connector housing comprising a connector having:

a recess adapted to receive at least a portion of a modular plug, said modular plug having a plurality of terminals disposed thereon;

15 at least one substrate having at least one electrically conductive pathway associated therewith;

a cavity adapted to receive at least a portion of said at least one substrate;

20 a plurality of first conductors disposed at least partly within said recess, said first conductors being configured to form an electrical contact with respective ones of said terminals when said modular plug is received within said recess, and form an electrical pathway between said first conductors and said at least one substrate; and

a plurality of second conductors, at least one of said second conductors being in electrical communication with said at least one electrically conductive pathway of said at least one substrate;

25 wherein at least a portion of said first conductors are substantially coplanar and each include an effectively curved portion, the effective radius of each said effectively curved portion being different for each of said first conductors.

48. The connector assembly of Claim 47, wherein said effectively curved portions each comprises a substantially continuous bend radius.

30 49. The connector assembly of Claim 47, wherein said effectively curved portion of said first conductors comprises a plurality of bend segments.

50. The connector assembly of Claim 47, further comprising at least one electrical component disposed on said at least one substrate, wherein said at least one electrical component has an elevation below that of said first conductors.

51. The connector assembly of Claim 47, further comprising at least one conductor carrier, said carrier being adapted to retain said first conductors in a predetermined orientation.

52. A connector assembly comprising:
a connector housing comprising a connector having:

a recess adapted to receive at least a portion of a modular plug, said modular plug having a plurality of terminals disposed thereon;

at least one substrate having at least one electrically conductive pathway associated therewith;

a cavity adapted to receive at least a portion of said at least one substrate;

a plurality of first conductors disposed at least partly within said recess, said first conductors being configured to form an electrical contact with respective ones of said terminals when said modular plug is received within said recess, and form an electrical pathway between said first conductors and said at least one substrate; and

a plurality of second conductors, at least one of said second conductors being in electrical communication with said at least one electrically conductive pathway of said at least one substrate;

wherein said at least one substrate is disposed in substantially vertical orientation within, and substantially orthogonal to the front face of, said housing.

53. The connector assembly of Claim 52, wherein at least a portion of said first conductors are substantially coplanar and each include an effectively curved portion, the effective radius of each said effectively curved portion being different for each of said first conductors.

54. The connector assembly of Claim 52, wherein said first and second conductors mate with said at least one substrate at the top and bottom portions thereof, respectively.

55. A multi-port connector assembly comprising:
a connector housing comprising a plurality of connectors each having:

a recess adapted to receive at least a portion of a modular plug, said modular plug having a plurality of terminals disposed thereon;

at least one substrate having at least one electrically conductive pathway associated therewith, said at least one substrate being disposed in substantially orthogonal orientation with respect to a front face of said housing;

a cavity adapted to receive at least a portion of said at least one substrate;

a plurality of first conductors disposed at least partly within said recess, said first conductors being configured to form an electrical contact with respective ones of said terminals when said modular plug is received within said recess, and form an electrical pathway between said first conductors and said at least one substrate;

a plurality of second conductors, at least one of said second conductors being in electrical communication with said at least one electrically conductive pathway of said at least one substrate; and

at least one conductor carrier, said at least one conductor carrier comprising a substantially unitary body having a plurality of grooves formed therein, said grooves further adapted to frictionally receive at least a portion of respective ones of said first conductors therein, said first conductors and said plurality of grooves each including an effectively curved portion, the effective radius of each being different, said at least one carrier also being adapted to retain said first conductors substantially coplanar and separated from one another.

56. A multi-port connector assembly comprising:

a connector housing comprising a plurality of connectors each having:

a recess adapted to receive at least a portion of a modular plug, said modular plug having a plurality of terminals disposed thereon;

at least one substrate having at least one electrically conductive pathway associated therewith, said at least one substrate being disposed in substantially orthogonal orientation with respect to a front face of said housing;

a cavity adapted to receive at least a portion of said at least one substrate;

a plurality of first conductors disposed at least partly within said recess, said first conductors being configured to form an electrical contact with respective ones of said terminals when said modular plug is received within said recess, and form an electrical pathway between said first conductors and said at least one substrate; and

5 a plurality of second conductors, at least one of said second conductors being in electrical communication with said at least one electrically conductive pathway of said at least one substrate;

wherein at least some of said first conductors comprise at least three conductor segments, said at least three segments comprising:

10 at least a first segment oriented substantially normal to said at least one substrate;

at least a second segment communicating with said at least first segment, said second segment having a substantially different angular orientation with respect to said at least one substrate than said at least first segment; and

15 at least a third segment communicating with said at least second segment, said third segment having a substantially different angular orientation with respect to said at least one substrate than said at least first or second segments.

57. A multi-port connector assembly comprising:

a connector housing comprising a plurality of connectors each having:

20 a recess adapted to receive at least a portion of a modular plug, said modular plug having a plurality of terminals disposed thereon;

at least one substrate having at least one electrically conductive pathway associated therewith, said at least one substrate being disposed in substantially orthogonal orientation with respect to a front face of said housing;

25 a cavity adapted to receive at least a portion of said at least one substrate;

a plurality of first conductors disposed at least partly within said recess, said first conductors being configured to form an electrical contact with respective ones of said terminals when said modular plug is received within said recess, and form an electrical pathway between said first conductors and said at least one substrate; and

a plurality of second conductors, at least one of said second conductors being in electrical communication with said at least one electrically conductive pathway of said at least one substrate;

wherein at least two of said connectors are disposed in a port pair, said first
5 conductors of a first connector in said port pair being routed over at least a portion of their length to a corresponding one of said at least one substrate in a direction having an angular relationship to the corresponding portion of said first conductors associated with a second connector in said port pair.

58. The connector assembly of Claim 57, wherein said at least portion of said
10 first conductors comprises that proximate to said at least one substrate, and said angular relationship comprises routing the first conductors of said first connector in said port pair to mate with said at least one substrate in a direction which is substantially opposite to that of the corresponding portions of said first conductors of said second connector of said port pair.

15 59. A connector assembly comprising:
a connector housing;
a recess formed in a front surface of said housing and adapted to receive at least a portion of a modular plug, said modular plug having a plurality of terminals disposed thereon;

20 at least one substrate having at least one electrically conductive pathway associated therewith;

a rear cavity formed within said housing and adapted to receive at least a portion of said at least one substrate;

25 a plurality of first conductors disposed at least partly within said recess, said first conductors being configured to form an electrical contact with respective ones of said terminals when said modular plug is received within said recess, and form an electrical pathway between said first conductors and said at least one substrate; and

a plurality of second conductors, at least one of said second conductors being in electrical communication with said at least one electrically conductive pathway of said at least one substrate;

wherein at least a portion of said first conductors are substantially coplanar and each include an effectively curved portion, the effective radius of each said effectively curved portion being different for each of said first conductors.

60. A connector assembly comprising:

a connector housing;

a recess formed in a front surface of said housing and adapted to receive at least a portion of a modular plug having a plurality of terminals;

at least one substrate having first electrically conductive pathways associated therewith;

a rear cavity formed within said housing and adapted to receive at least a portion of said at least one substrate;

a plurality of first conductors disposed at least partly within said recess, said first conductors being configured to form an electrical contact with respective ones of said terminals, and form second electrically conductive pathways between said first conductors and said at least one substrate;

electronic components disposed in at least some of said first conductive pathways; and

a plurality of second conductors, at least one of said second conductors being in electrical communication with respective ones of said first electrically conductive pathways;

wherein at least some of said first conductors have portions which are substantially coplanar with similar portions of other of said first conductors, and include an effectively curved portion, the effective radius of each said effectively curved portions being different for each of said at least some first conductors.

61. A connector assembly comprising:

connector housing means:

a recess formed within said housing means and adapted to receive at least a portion of a modular plug having a plurality of terminals;

at least one means for supporting components having at least one electrically
5 conductive pathway associated therewith;

a cavity formed in said housing means and adapted to receive at least a portion of said at least one means for supporting;

a plurality of first conductor means disposed at least partly within said recess, said first conductor means being configured to form an electrical contact with respective ones of
10 said terminals, and form an electrical pathway between said first conductor means and said at least one means for supporting; and

a plurality of second conductor means, at least one of said second conductor means being in electrical communication with said at least one electrically conductive pathway of said at least one means for supporting;

15 wherein at least some of said first conductor means have an effectively curved portion, the effective radius of each said effectively curved portions being different for each of said first conductor means, said effectively curved portions of each of said at least some conductor means also being substantially coplanar with one another.

62. A multi-port connector assembly comprising:

20 a connector housing comprising a plurality of connectors each having:

a recess adapted to receive at least a portion of a modular plug, said modular plug having a plurality of terminals disposed thereon;

at least one substrate having at least one electrically conductive pathway associated therewith, said at least one substrate being disposed in substantially orthogonal orientation
25 with respect to a front face of said housing;

a cavity adapted to receive at least a portion of said at least one substrate;

a plurality of first conductors disposed at least partly within said recess, said first conductors being configured to form an electrical contact with respective ones of said

terminals when said modular plug is received within said recess, and form an electrical pathway between said first conductors and said at least one substrate;

5 a plurality of second conductors, at least one of said second conductors being in electrical communication with said at least one electrically conductive pathway of said at least one substrate; and

10 at least one means for holding said first conductors, said means comprising a plurality of restraining means, said restraining means further adapted for receiving at least a portion of respective ones of said first conductors, at least some of said first conductors including an effectively curved portion, the effective radius of each such curved portion being different, said at least one holding means also being adapted to retain said first conductors substantially coplanar and separated from one another.